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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,038	01/17/2002	Nobuko Fukuoka	P 284995 5JG32931-USAAT	1206
909	7590	01/13/2004	EXAMINER HON, SOW FUN	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			ART UNIT 1772	
			PAPER NUMBER	
			1772	
			DATE MAILED: 01/13/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Applicati n No.

10/050,038

Applicant(s)

FUKUOKA ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

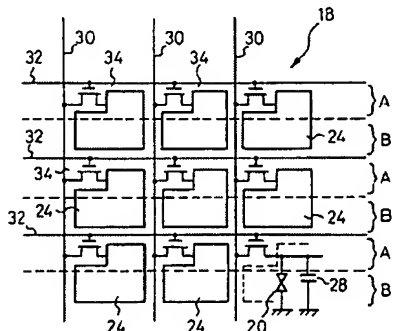
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

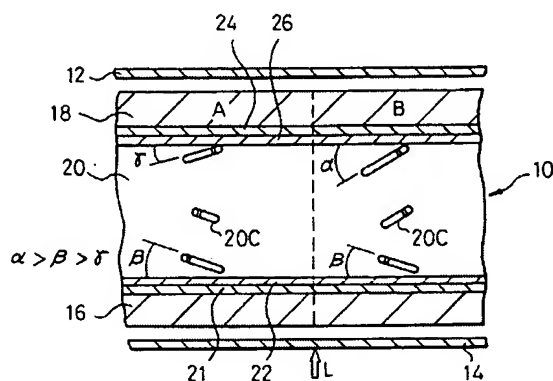
Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____



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Below in Fig. 4, Koike et al. shows a circuit array substrate 18 having pixel electrodes 24, a counter substrate 16 (column 12, lines 1-2) having a common electrode 21, alignment films 22 and 26 formed on said pixel electrodes 24 and said common electrode 21, and a liquid crystal composition 20 charged in a gap between said circuit array substrate 18 and counter substrate 16 (column 11, lines 50-55).

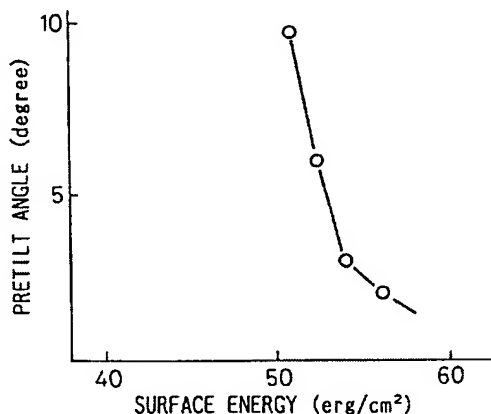


While Koike et al. teaches that the color filter layer (not shown) is provided under the common electrode 21 (column 11, lines 65-70), Koike et al. also states that it is possible to reverse the common electrode 21 and the pixel (element) electrode 24 (column 12, lines 1-2). Therefore it would have been obvious to one of ordinary skill to have interposed the color filter under the pixel electrode 24 instead of common electrode 21, which places the color filter between the pixel electrode 24 and the circuit array substrate 18.

Koike et al. teaches that an increase in surface energy of the alignment films reduces the pretilt angle, and that this is done by taking advantage of UV irradiation of the polyimide film (column 16, lines 1-15). The polyimide film before irradiation has a higher pretilt angle with the corresponding lower surface energy (column 15, lines 55-65). Thus Koike et al. teaches

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that low pretilt angle with the corresponding high surface energy for the alignment film is desirable.



The graph of pretilt angle versus surface energy above shows that the area of interest corresponding to the desired low tilt angle is the one with the surface energy of greater than 50 and less than 60 dyn/cm (erg/cm²) which overlaps the claimed range of 51 to 60 dyn/cm. The prevention of image-sticking phenomenon and white or black turbid spots is the result of the low pretilt angle with the corresponding high surface energy of the alignment layer.

Although Koike et al. fails to teach that the color filter is made of resin, a resin color filter is common in the art as evidenced by Yoshino et al.

Yoshino et al. teaches that the color filter for use in a liquid crystal display is usually made of pigmented or dyed organic resin (column 1, lines 60-70).

Response to Arguments

4. Applicant's arguments with respect to claims 1-2 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1300.

SH
Sow-Fun Hon
01/06/04


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/8/04